

WHAT IS CLAIMED IS:

1. A method of performing customer management relationship processing in a computer, comprising:

(a) accessing customer transaction data from a database managed by the computer;

and

(b) performing a pattern detection function in the computer using the customer transaction data accessed from the database, wherein the pattern detection function finds patterns in customer purchasing behavior, as evidenced by the customer transaction data, related to a sequence of when purchases occur.

2. The method of claim 1, wherein the pattern detection function identifies the patterns in the customer purchasing behavior leading up to and after a significant purchase.

3. The method of claim 1, wherein the pattern detection function discovers which of the patterns in the customer purchasing behavior are associated with future purchases.

4. The method of claim 1, wherein the pattern detection function finds the patterns in the customer purchasing behavior by comparing a focal product set to an analysis product set over a specified time interval.

5. The method of claim 4, further comprising determining when an item from the analysis product set is purchased after an initial purchase of an item from the focal product set over the specified time interval.

6. The method of claim 4, wherein the focal product set includes products that trigger a sequence of the customer purchasing behavior for the specified time interval.

7. The method of claim 4, wherein the analysis product set includes products that describe the customer purchasing behavior.

8. The method of claim 4, wherein the pattern detection function filters the customer transaction data using a specified attribute in order to reduce the customer transaction data examined for the focal product set.

5 9. The method of claim 4, wherein the pattern detection function filters the customer transaction data using a specified attribute in order to reduce the customer transaction data examined for the analysis product set.

10 10. The method of claim 4, further comprising specifying a measure to display for the analysis product set.

15 11. The method of claim 10, wherein the measure is selected from a group comprising: number of customers, sales, confidence, normalized sales, average spending amount, and support.

12. The method of claim 10, further comprising displaying a chart on the computer generated by the pattern detection function that shows the measure for the analysis product set.

20 13. The method of claim 12, wherein the displayed chart illustrates purchases from the analysis product set over time periods before and after an initial purchase of the focal product set.

25 14. The method of claim 1, further comprising selecting a segment of customers from the database based on one or more specified attributes, wherein the selected segment of customers is used to identify the customer transaction data to use in the pattern detection function.

30 15. The method of claim 1, further comprising specifying a customer level to determine how to aggregate the customer transaction data.

16. A customer management relationship system, comprising:
- (a) a computer;
 - (b) logic, performed by the computer, for:
 - (1) accessing customer transaction data from a database managed by the
 - 5 computer; and
 - (2) performing a pattern detection function in the computer using the
 - customer transaction data accessed from the database, wherein the pattern detection
 - function finds patterns in customer purchasing behavior, as evidenced by the
 - customer transaction data, related to a sequence of when purchases occur.
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17. The system of claim 16, wherein the pattern detection function identifies the
- patterns in the customer purchasing behavior leading up to and after a significant purchase.
18. The system of claim 16, wherein the pattern detection function discovers
- 15 which of the patterns in the customer purchasing behavior are associated with future
- purchases.
19. The system of claim 16, wherein the pattern detection function finds the
- patterns in the customer purchasing behavior by comparing a focal product set to an analysis
- 20 product set over a specified time interval.
20. The system of claim 19, further comprising logic for determining when an
- item from the analysis product set is purchased after an initial purchase of an item from the
- focal product set over the specified time interval.
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21. The system of claim 19, wherein the focal product set includes products that
- trigger a sequence of the customer purchasing behavior for the specified time interval.
22. The system of claim 19, wherein the analysis product set includes products
- 30 that describe the customer purchasing behavior.

23. The system of claim 19, wherein the pattern detection function filters the customer transaction data using a specified attribute in order to reduce the customer transaction data examined for the focal product set.

5 24. The system of claim 19, wherein the pattern detection function filters the customer transaction data using a specified attribute in order to reduce the customer transaction data examined for the analysis product set.

10 25. The system of claim 19, further comprising logic for specifying a measure to display for the analysis product set.

15 26. The system of claim 25, wherein the measure is selected from a group comprising: number of customers, sales, confidence, normalized sales, average spending amount, and support.

20 27. The system of claim 25, further comprising logic for displaying a chart on the computer generated by the pattern detection function that shows the measure for the analysis product set.

25 28. The system of claim 27, wherein the displayed chart illustrates purchases from the analysis product set over time periods before and after an initial purchase of the focal product set.

30 29. The system of claim 16, further comprising logic for selecting a segment of customers from the database based on one or more specified attributes, wherein the selected segment of customers is used to identify the customer transaction data to use in the pattern detection function.

35 30. An article of manufacture embodying logic for performing customer management relationship processing in a computer, the logic comprising:

(a) accessing customer transaction data from a database managed by the computer; and

(b) performing a pattern detection function in the computer using the customer transaction data accessed from the database, wherein the pattern detection function finds patterns in customer purchasing behavior, as evidenced by the customer transaction data, related to a sequence of when purchases occur.

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31. The article of manufacture of claim 30, wherein the pattern detection function identifies the patterns in the customer purchasing behavior leading up to and after a significant purchase.

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32. The article of manufacture of claim 30, wherein the pattern detection function discovers which of the patterns in the customer purchasing behavior are associated with future purchases.

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33. The article of manufacture of claim 30, wherein the pattern detection function finds the patterns in the customer purchasing behavior by comparing a focal product set to an analysis product set over a specified time interval.

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34. The article of manufacture of claim 33, further comprising determining when an item from the analysis product set is purchased after an initial purchase of an item from the focal product set over the specified time interval.

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35. The article of manufacture of claim 33, wherein the focal product set includes products that trigger a sequence of the customer purchasing behavior for the specified time interval.

36. The article of manufacture of claim 33, wherein the analysis product set includes products that describe the customer purchasing behavior.

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37. The article of manufacture of claim 33, wherein the pattern detection function filters the customer transaction data using a specified attribute in order to reduce the customer transaction data examined for the focal product set.

38. The article of manufacture of claim 33, wherein the pattern detection function filters the customer transaction data using a specified attribute in order to reduce the customer transaction data examined for the analysis product set.

5 39. The article of manufacture of claim 33, further comprising specifying a measure to display for the analysis product set.

40. The article of manufacture of claim 39, wherein the measure is selected from a group comprising: number of customers, sales, confidence, normalized sales, average
10 spending amount, and support.

41. The article of manufacture of claim 39, further comprising displaying a chart on the computer generated by the pattern detection function that shows the measure for the analysis product set.
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42. The article of manufacture of claim 41, wherein the displayed chart illustrates purchases from the analysis product set over time periods before and after an initial purchase of the focal product set.

20 43. The article of manufacture of claim 30, further comprising selecting a segment of customers from the database based on one or more specified attributes, wherein the selected segment of customers is used to identify the customer transaction data to use in the pattern detection function.